

PALYNOLOGY OF THE BORATE BEARING NEOGENE SEDIMENTS IN BİGADIÇ, KESTELEK, EMET AND KIRKAREGIONS

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ABSTRACT. - The Neogene graben systems of western Anatolia are filled by clastic, carbonate and volcanic material. In some places these continental deposits contain economically potential coal, bituminous shale, uranium, clay and borates. Borate beds in Bigadiç, Kestelek, Emet and Kırka Neogene basins are accompanied by thin layers and lenses of coal and coaly shale which are distinguished by a rich microflora. The microflora of these basins consists of two pollen assemblages "a lower and an upper pollen assemblages". These assemblages enable us to correlate the sedimentary sequences of the basins and to understand the palaeoclimatic and paleogeographic conditions prevailed during the Neogene. The lower pollen assemblage which is Early Serravallian in age are recognized in Çan, Orhaneli, Soma, Selendi, Şahinli. It is indicative of widespread forests during this time. Mammalian fauna studied in Tire and Sarçay is also conclusive of forest environment. The sedimentary sequences which contain coal-bearing sand, clay and calcareous shale were deposited in lakes surrounded by mountains with a dense vegetation. The upper pollen assemblage is Late Tortonian in age. Although it broadly represents a moderate humid climate, a relatively dry and coal environment can be suggested when compared with that of the Early Serravallian time. Widely distributed Late Tortonian mammalian fauna, which is well known in western Anatolia, indicates wide steppes. However, as it is the case in four basins with upper pollen assemblage, the Late Tortonian steppes were studied by savannah parks.

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